

# A lesson for 14- to 16-year-olds

This lesson gives students the opportunity to explore what human genetic engineering is and what the possible advantages and disadvantages are. Pupils will be able to express their own opinions on this area and will also investigate The Salvation Army's standpoint on human genetic engineering.

# Lesson Outcomes

• To understand what human genetic engineering is and to be able to explain some of the possible advantages and disadvantages

• To express your own opinion on the use of human genetic engineering showing you have thought of different points of view

• To investigate The Salvation Army's point of view on human genetic engineering, showing understanding of its beliefs and the biblical teachings supporting these beliefs

## Resources

- Human Genetic Engineering PowerPoint presentation
- Human Genetic Engineering positional statement
- Card sort
- Gattaca video clip (www.wingclips.com/movie-clips/gattaca/be-realistic)

# **Curriculum Links**

England and Northern Ireland

AQA Religious Studies B

3.3 Unit 3 Religious Attitudes to Matters of Life (Medical Ethics)

• the concept of the sanctity of life in relation to medical research and practice in the areas of: human genetic engineering, including designer babies

3.2 Unit 2 Religion and Early Life

• the concept of the sanctity of life in relation to its preservation

#### Ireland

Section D

The Question of Faith

- the scientific world view
- the question of creation

• introducing some aspects of the relationship between personal morality and state law and situations where conflict might arise

#### Scotland

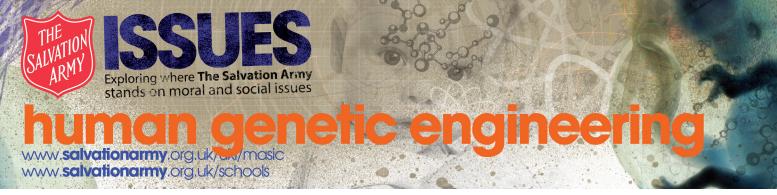
• develop skills to describe and express views about contemporary moral questions and responses

• develop straightforward knowledge and understanding of contemporary moral questions and religious and non-religious responses

#### Wales

Unit 3 Looking for Meaning

• stances religious believers take on issues deriving from a belief in the sanctity of life.



## Starter

Ask pupils the question as shown on the first slide - If you could change one physical feature about yourself what would it be? Ask pupils to discuss this with the person next to them (if they are comfortable in doing so) and then to think about the following two questions:

1) What would the advantages be of people being able to choose their physical features?

2) What would the disadvantages be of people being able to choose their physical features?

Ask for some feedback for questions 1 and 2 and go on to introduce the theme of today's lesson. Go through the lesson outcomes.

## Phase 1

Explain that we are now going to complete an activity that will help you understand more about what genetic engineering is and what the possible advantages and disadvantages to it are. Give the pupils the question and answer cards and explain that they have to match the answers to the correct questions. Explain that there may be more than one answer for the questions.

After the students have had an opportunity to match up the cards, go over the answers asking pupils for feedback. You may want the pupils to stick these in their books if there is time.

Go on to explain that we are now going to watch a short video clip from the film Gattaca. This is set in a time where genetically engineered humans are seen as superior. A man called Vincent Freeman has dreams of becoming an astronaut, but his genetic make-up makes him inferior. This clip shows how he finds out that his genetic make-up could ensure he never fulfils his dreams. Show video clip. Ask students to consider whether they think genetic engineering could class people as being superior or inferior. Is this right or wrong?

#### **Review Progress**

Pupils are to explain one advantage of human genetic engineering and one disagdvantage of human genetic engineering to their partner. Ask for some feedback.

#### Phase 2

Hand out The Salvation Army's Human Genetic Engineering positional statement, and read it through once with the class. Ask pupils then to complete an activity in pairs where one pupil highlights the positive things mentioned about genetic engineering and the other pupil highlights all of the reasons The Salvation Army thinks human genetic engineering may be negative. Ask pupils to share the things they have highlighted with their partner and then pick out some pupils to feed back.



For what reasons would belief in God change your view on genetic engineering? Ask pupils to discuss this in groups of four and then ask for some feedback. Go over some of the Bible verses as shown on the PowerPoint presentation asking the pupils to discuss in their groups how this might link to human genetic engineering and then sharing any ideas the groups have had. Explain that they may want to know a couple of Bible verses for the exam for this topic - give pupils a chance to write a verse down if needed. Now show the practice exam question on the slide. If there's time you may want pupils to write down their answers in full, or alternatively you could ask pupils to write down some notes in bullet points and ask for feedback.

# Plenary

To finish with, ask pupils to think about whether they think human genetic engineering is a good idea or a bad idea, or if they are unsure. Ask pupils to stand in one area of the room if they think it's a good idea, another area of the room if they think it's a bad idea and another area of the room if they are unsure. Explain that they need to keep in mind the different points of view and be able to explain why they have the opinion they do. When all the pupils have chosen where to stand, pick out a few pupils to feed back.